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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,044	04/13/2004	William I. Brobeck	9409-1	6023

7590 05/19/2005

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EXAMINER

LE, THIEN MINH

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8M

Office Action Summary	Application No.	Applicant(s)	
	10/824,044	BROBECK, WILLIAM I.	
	Examiner	Art Unit	
	Thien M. Le	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims 1-4 are presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1 are rejected under 35 U.S.C. 102(b) as being anticipated by Schoenfelder (Schoenfelder – 4,103,493).

Schoenfelder discloses a "method and apparatus for use of solar energy. The method and apparatus has the advantage and benefit of providing for use of all collected solar energy, whether or not there is an immediate need in the home for heating. Solar energy is also used for cooling a home or existing building structure via utilization of a heat pump system. The apparatus comprises in combination a direct boil solar collector which boils a refrigerant therein, a Rankine cycle engine for converting heat energy transferred to said refrigerant to kinetic energy, a generator, a heat pump system, and means connected to the Rankine cycle to selectively transfer said kinetic energy from the Rankine engine to the generator or the heat pump. Excess energy not utilized for heating or cooling the home system is returned to a utility power grid for a credit for the home owner and immediate redistribution by the utility to other users ." (Abstract)

According to Schoenfelder, "the kinetic energy generated by the Rankine cycle engine 18 is transferred via transmission 20 to genertor 22, electrical current 24 will be generated. Electrical current 24 can be utilized to supply the existing electrical needs of the home or other building structure. In addition, any excess electrical current not utilized for the needs of the existing home or building structure can be returned via the schematic for metering circuitry as shown in FIG. 5 to a utility power grid. This will be described in more detail hereinafter. But as can be seen this allows the possibility of direct use of solar energy whether or not the home is in need of heat at any given moment. Thus by conversion to electrical energy, the solar energy can be utilized for the electrical needs of the home and to the extent that excess electricity is generated it can be redistributed back to an electrical utility. In other words, storage of solar energy is effectively accomplished by a paper credit to the home owner for excess generated

electrical current beyond the needs of the home. Thus since there is no actual physical storage of heat within the solar power system of this invention, it eliminates the high cost of such physical storage, the loss of valuable floor space, and importantly it eliminates the inherent heat losses which always occur in physical heat storage elements" (col. 5, lines 55-68).

"With regard to the mode of operation shown in FIG. 1 and FIG. 3, there is generation of excess electrical current, because the solar energy is greater than either the demand for heating and cooling. As heretofore previously mentioned, one of the advantages of this invention is that such excess energy is not wasted but is converted into usable electrical energy. That electrical energy is utilized, to the extent necessary, by the home or other building structure's electrical system and to the extent that excess amounts beyond the requirements of the home are generated is fed back to a utility power grid system for immediate redistribution elsewhere. Thus storage of the energy is via an electrical credit with the utility company. Of course, the power fed back into the utility grid must be synchronized with the utility power system. This is already conventionally done with existing generator systems which operate in parallel with utility power systems. And a like synchronization would occur here. Power that is sent to the utility power grid is credited to the home owner simply by installing two meters. One meter registers only incoming electricity and the other registers outgoing current from generator 22. The meters are read in a manner consistent with current meter reading with the exception that the outgoing meter quantity is subtracted from the incoming meter quantity to determine the owner's net energy consumption. FIG. 5 illustrates one method of circuitry for accomplishing this result. Contacts 88 and 90 are opened or closed by load monitor 92. Contact 94 is opened or closed by electrical impulse sensor 96. Electrical impulse sensors 98

and 100 are connected to load monitor 92. When the generator starts, sensor 96 closes contact 94 and sends an electrical current to the synchronizer 102 which allows the home generated electricity to parallel the utility grid electricity. After synchronization, electricity enters the main 104. Electrical impulse sensors 98 and 100 sense the current in each line and sends signals back to the load monitor 92. Load monitor 92 compares the signals from sensors 98 and 100 and if the current in sensor 100 is greater than the current load in sensor 98, load monitor 92 opens contact 88 and closes contact 90. Electricity flows through the in meter 106. If the current in sensor 98 is greater than the current of sensor 100, load monitor 92 closes contact 88 and opens contact 90 and excess electricity passes through out meter 108 recording the proper credit for generated electrical current.” (col. 8, lines 45-68)

Regarding claims 1 and 2, Schoenfelder discloses a system for measuring excess power generated by a solar system using out meter 108 to a power grid; awarding the home owner energy credits for the excess energy; allowing the home owner to redeem the paper credit for energy usage measured from incoming meter 106; and a utility company for brokering by maintaining and keeping track of paper credits generated from the system for the home owner. As can be seen, Schoenfelder discloses the claimed invention.

Regarding claim 3, see the discussions regarding claims 1-2.

Regarding claim 4, see the discussions regarding claims 1-3. Further, the claim specifically recites that the “brokerage house to retain as profit a portion of said compensation”. The examiner is of the view that this claimed limitation is inherent in the system as taught by Schoenfelder. This is because utility company must include

some sort of processing fees in order to maintain proper operation of the out meter 108, the database and personnel for proper management of the paper credits awarded to the customer for the amount corresponding to the excess energy.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien M. Le whose telephone number is (571) 272-2396. The examiner can normally be reached on Monday - Friday from 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Le, Thien Minh
Primary Examiner
Art Unit 2876**